Patent claims

1. Water-dilutable alkyd resins **ABC** containing unsaturated fatty acids **C** which are bonded via ester groups to graft copolymers **AB** containing hydroxyl groups, these graft copolymers **AB** being obtained by grafting a mixture of vinyl monomers **B** on to alkyd resins **A**.

2. The water-dilutable alkyd resins **ABC** of claim 1, characterised in that the mass fraction of the fatty acids **C** in the alkyd resins **ABC** is from 20 % to 60 %.

3. The water-dilutable alkyd resins **ABC** of claim 1, characterised in that the mixture of the vinyl monomers **B** contains a mass fraction of from 8 % to 30 % of monomers **B1** containing carboxyl groups.

4. The water-dilutable alkyd resins **ABC** of claim 1, characterised in that it contains a mass fraction of from 10 % to 60 % of unsaturated fatty acids **B2**, based on the mass of the mixture of the vinyl monomers **B**.

5. The water-dilutable alkyd resins **ABC** of claim 1, characterised in that the mixture of the vinyl monomers contains a mass fraction of from 0 % to 10 % of olefinically unsaturated compounds **B4** selected from the group consisting of ethers of olefinically unsaturated alcohols with monoalkoxy-oligo- or -polyethylene glycol or monoalkoxy-oligo- or -polypropylene glycol, the monoalkoxy derivatives of mixed oligo- or polyglycols containing C_2- and C_3-alkylene units, and the half-esters of these monoalkoxy glycols with olefinically unsaturated carboxylic acids.

6. The water-dilutable alkyd resins **ABC** of claim 1, characterised in that they have a hydroxyl number of from 5 mg/g to 150 mg/g and a Staudinger index of from 8 cm^3/g to 15 cm^3/g, measured in chloroform.

7. A process for the preparation of water-dilutable alkyd resins **ABC** according to claim 1, containing the steps of

polycondensation of dicarboxylic acids **A1**, aliphatic monocarboxylic acids **A2**, aliphatic linear, branched or cyclic alcohols **A3** having at least two hydroxyl groups and optionally aliphatic di- or monoepoxides **A4** to produce alkyd resins **A**

admixing of unsaturated fatty acids **B2**

grafting of the mixture of the alkyd resins **A** and the fatty acids **B2** with a mixture of vinyl monomers **B** comprising vinyl monomers **B1** containing carboxyl groups and vinyl monomers **B3** that contain neither hydroxyl groups nor acid groups, in the presence of free radical initiators to produce a graft copolymer **AB** containing carboxyl groups,

condensation of the graft copolymer **AB** with unsaturated fatty acids **C** under esterification conditions to produce a water-dilutable alkyd resin **ABC**.

8. The process of claim 7, characterised in that the mixture of the vinyl monomers additionally contains olefinically unsaturated monomers **B4** according to claim 5.

9. A method of use of the water-dilutable alkyd resins **ABC** of claim 1 for formulation of paints, comprising the steps of neutralisation of the alkyd resins **ABC**, during which from 30 % up to 100 % of the acid groups of the alkyd resins **ABC** are neutralised, and emulsifying of the neutralised alkyd resins **ABC** in water.

10. The method of use of claim 9 for formulation of pigmented paints, characterised in that the pigments are dispersed in the alkyd resins **ABC** before neutralisation.

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